بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــسـم ﴾

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CORRELATION BETWEEN NECK PROPRIOCEPTION DEFICIT AND BALANCE IN CHRONIC MECHANICAL NECK PAIN

By

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B.Sc. in Physical Therapy
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A Thesis Submitted to Basic Science Department in Partial Fulfillment of the Requirements for Master Degree in Physical Therapy

Faculty of Physical Therapy
Cairo University
2005

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بسم الله الرحمن الرحيم

﴿رَبِّ هَبْ لِي حُكْمًا وَأَلْحِقْنِي بِالصَّالِحِينَ ۞ وَاجْعَل لِّي لِسَانَ صِدْقٍ فِي الْآخِرِينَ ۞ وَاجْعَلْنِي مِن وَرَثَةِ جَنَّةِ النَّعِيمِ﴾

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DEDICATION

*To **my parents**, who gave me everything.*

*To **my husband** for his continuous help.*

*For the precious time **my sisters** spent with me.*

*To my lovely daughter **Nadine**.*

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Abstract

Back ground: Patients with chronic mechanical neck pain showed larger sway areas in standing posture and reduced ability to successfully execute more challenging balance tasks. **The purpose** of the study was to determine the correlation between neck proprioception defict and balance in chronic mechanical neck pain patients.**Subjects:** Thirty subjects (13 Females and 17 Males); mean age was (41.5 ±3.7). They were assigned from out clinic of the Faculty of Physical Therapy, suffering from chronic mechanical neck pain (neck pain persisted more than three month). They were assigned in one group. The neck proprioception accuracy level was measured by using CROM device and balance was measured by using Biodex stability system. **Results**: Active neck repositioning accuracy level was poor in patient with chronic mechanical neck pain. Also balance was disturbed in the same group. There was a statistically significant correlation between cervical proprioception deficit and balance in patient with chronic mechanical neck pain. **Conclusion:** it is indicated that the proprioception acuity is disturbed in patient with chronic mechanical neck pain. This deficit led to balance disturbances among these patients.This study recommended proprioceptive and balance rehabilitation programs among treatment plan of chronic mechanical neck pain.

(Key Words: chronic mechanical neck pain, Proprioception, Balance).

List of Abbreviations

A/P	Anteroposterior.
ARAT	Active Repositioning Accuracy Test
BOS	Base of Support.
CM	Centimeters
CNS	Central Nervous System.
COG	Center Of Gravity.
COM	Center of Mass.
COP	Center of Pressure.
CROM	Cervical Range of Motion
DLOS	Dynamic Limits of Stability
Fig.	Figure
LOS	Limits of Stability.
LR	left Rotation
LSB	Left Side Bending
M/L	Mediolateral.
Mm	Millimeters
RA	Repositioning Accuracy
ROM	Range of Motion
RR	Right Rotation
RSB	Right Side Bending
SI	Stability Index.
Sec	Second

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